

<http://www.pjbs.org>

PJBS

ISSN 1028-8880

**Pakistan
Journal of Biological Sciences**

ANSI*net*

Asian Network for Scientific Information
308 Lasani Town, Sargodha Road, Faisalabad - Pakistan

An Ethnomedicinal Inventory of Plants Used for Family Planning and Sex Diseases Treatment in Samahni Valley, (A.K.) Pakistan

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Abstract: Indigenous plants are indirectly associated to the culture and traditions of the local peoples. About 36 plant species, distributed in 26 families were used to treat sexual diseases and control birth rate, in Samahni valley (A.K.) Pakistan. The most of these plants grow wild (55.55%), are indigenous (61.11%) and herbs (52.77%). The plant parts frequently used are seed (22.72 %), root (20.45%), fruit, leaf and whole plant (9.09%) each. Medications are mostly prepared as decoctions and infusions. Most of curative species reported here are directed to control family size and treat sexual diseases; syphilis, leucorrhoea, menorrhagia, amenorrhoea, blennorrhoea, haemorrhoids, hydrocoele and regularise menses. The results of this study showed that people are still dependent on medicinal plants in this rural area of Samahni valley. The study enlightens how data of ethnomedicinal inventory of medicinal plants can be used effectively at local and regional level for phytochemical and pharmacological research. The study area due to unplanned exploitation had resulted in loss of medicinally important plant species. It was concluded that afforestation programme followed by proper protection is need of time.

Key words: Ethnobotany, ethnomedicines, family planning, Samahni valley, systematic exploration, Azad Kashmir

INTRODUCTION

Ethnopharmacology is the branch of knowledge dealing with interaction between local people and indigenous vegetation for their use as medicines and in curing common ailments. The use of medicinal plants treasure plays an important role in the lives of rural people, (Ahmad, 2003) especially in the developing countries of the world, which are poorly served with modern health facilities. Much of world's population depends upon traditional medicines to meet daily health requirements, usually more than 80% in developing countries of the world (Eddouks *et al.*, 2002). As human behavior has a direct impact on the plant communities with which they interact. These interactions are the focus of ethnobotany (Pei, 1995). Shinwari *et al.* (1996) discussed the present status of ethnobotany in Pakistan. He emphasized on the need of investigation, documentation and application of traditional knowledge in the use of natural resources. Shinwari and Khan (1999) reported ethnobotanical conservation status of Margalla hills, Islamabad. They described that the inhabitants of park have always used medicinal plants for various ailments and been dependent on surrounding plant resources for their food, shelter, health and other cultural

purposes for centuries. Leooratti and Lattanzi (1994) studied medicinal plants ethnobotanically in Makran. They also discussed their traditional medicinal uses. Goodman and Ghafoor (1992) conducted ethnobotanical study in Balochistan province. It is the region where a heterogeneous cultural group known as Baloch lives. They collected information about 114 plant species used by nomads and village dwellers. For area like Samahni no information about the plants used in medicines by the local inhabitants is available. The objectives of this study were to document this treasure, also to enlist and confirm the species of special concern. For this we have to stay with local people for participatory approaches.

Systematic explorations of traditional herbal medicines are urgently required in Samahni valley of Azad Kashmir, Pakistan; especially in this area for its geographical, historical reasons and hilly terrain (relatively isolated) and where industrial development has not completely lead a complete decline of traditional knowledge. In early 1950's up to 84% Pakistani population was dependent on traditional medicines for all or most of their medicinal uses (Hocking, 1958). In Himalayan ranges at least 70% of medicinal plants and animal species in the region consists of wild species, 70-80% population depend on these traditional medicines for health care

(Pie and Manandhar, 1987). Shinwari (1996) focused on information regarding traditional uses of plants of Kaghan valley. Shahzad *et al.* (1999) reported vegetation composition of Samahni valley (AJK). Shahzad and Qureshi (2001) have described the common ethnomedicinal uses of plants in Jatlan area district Mirpur (AJK). Dastagir (2001) reported the medicinal plants of Mai Dhani hill, Muzaffarabad (AK). Bukhari (1996) reported that as many as 69 plant species are used as crude drugs by the local people and folk lore for treating various diseases in National Park Machayara Muzaffarabad (A.K). Khan (1996) reported phytosociological study in Babusar valley and recorded five plant communities in Babusar valley, district Diamer. He also described the vegetation type, range management and medicinal plants of the area. Rasool (1998) studied the medicinal plants conservation status of Northern areas and recorded 60 medicinal plants from different locations of Northern areas. Gorski and Shahzad (2002) reported the medicinal uses of plants by the local community in Dhir Kot, district Bagh (AK). Muhammad Ishtiaq Ch *et al.* (2006) reported the ethnoveterinary medicinal uses of plants of Samahni valley, Azad Kashmir. Local people collect medicinal plants for use as home remedies at large. Information about the collection, quantities and uses of the plants are badly needed to be documented. The present study can serve as the foundation for further investigation because no detailed ethnobotanical exploration has been carried out in this area so far.

Pakistan located in south Asia, has landlocked soil with mountainous terrains having variable climatic habitats. Samahni Valley is one the Tehsil of district Bhimber, state of Azad Kashmir, Pakistan. Geographically it is located between 33.05° latitude and 74.82° longitude. It covers ca. 1270 km² and has 12 towns viz. Jandichontara, Dab, Bandala, Samahni, Chowki, Bindi, Jandala, Poona, Chaai, Baroh, Haripoor and Jajooha. It has north facing and south facing high mountains, with 1080-18975 ft altitude and variable topography. The valley is inhabited by these major ethnic tribes; viz; Jat, Rajpoot, Gujar, Bokarwals, Malik, Mirza, Arrain, Syed and Butt (Kashmiries). The people are mainly dependent on agriculture and forest products (timber and herbs). There are only few towns which have well-trained doctors, while it is too insufficient number for such big population viz. 45 thousands. The surrounding plants for these people form an integral part of their culture and the informations about the plants get pass on from generation to generation only through oral folk lore, major way of learning and teaching ethnomedicinal (EM) knowledge.

The local tribes harbour the vast diversified flora which is mainly coniferous and tropical forest. These herbal medicines are used for population (birth) control

and to treat sexual diseases. Traditional sterilization method based on ethnomedicines is used to control population growth rate, including abortion at initial weeks, preventing conception or making the either member of the couple sterile. The tribal people also use the local herbal remedies to cure sterility and enhance the chances of conception and to cure sexual diseases leucorrhoea, gonorrhoea, menorrhagia, galactorrhoea, and regularise menses on daily basis.

Why EM knowledge of the area is documented: In many developing countries people mostly rely on EM to treat diseases, because western-based health care system is inefficient due to poor staffing or because western drugs are expensive. EM is system of maintaining health and curing diseases based on folk beliefs and traditional knowledge (TK), skills, methods and practices. As EM knowledge is being disappearing because of rapid socio-economic, environmental and technological changes. Therefore, EM knowledge must be documented and conserved through systematic studies before it is lost forever. To date there has been no systematic recording of EM knowledge used to control birth rate and sexual diseases in Samahni valley. Systematic studies on the area are justified for important reasons, they can: (1) generate concise information which can be used to develop birth control practices and methods that are locally suitable in Samahni valley, (2) if developed systematically EM can be a key birth control and sex-related diseases cure resource, (3) can also add new drugs to modern population control and sex-related pharmacopoeia. The main aim of this study was to document the plant's ethnomedicinal uses, being used to control birth rate and cure sex diseases. So it is important to study how these tribal people have been using local herbs for control of family size and cure of many diseases by their traditional EM knowledge, which profound the aim of this study project.

MATERIALS AND METHODS

The field work for this study was conducted between June 2001 and June 2003. For collection of data pertinent to ethnobotany, conservation and plant diversity of the area we used semi-structured interviews, questionnaire and direct observations to collect data (Martin, 1995). Each study trip was well planned and executed effectively. Prior to any contact with the local people, the study and its objectives were introduced to the town chairman/officer; this introduction was always repeated when entering a new administrative area (e.g., town or village). The timings for fieldwork were selected according to the growth and collection season of the plants. Six key

informants were interviewed using a semi-structured interview schedule consisting of checklist of questions. Household respondents were chosen through stratified sampling. In each town, a respondent was randomly chosen from at least one village from each parish from the town. In this way 140 household respondents were interviewed. Population size and its distribution, languages, ethnic affiliation, history of settlement, major social groups or classes, productive activities, subsistence crops, migration trends etc. were also explored during the field work.

We administered a questionnaire consisting of mixture open- and closed-ended questions in face-to-face interviews. Some of the farmers and local hakims (ethnomedicine practitioner) were a little hesitating and reluctant to tell us their local ethnomedicine based treatment methods used for control family size and cure sex diseases. The asked questions focused on determining (1) which sex diseases are common in community (2) which herbs are mostly used for birth control and how these are mostly used. The interviews were conducted in local language, *Pahari* and *Panjabi*. The interviews were direct supplemented by direct observations. Plant voucher specimens (ISB) were collected and deposited at Quaid-e-Azam university herbarium, Islamabad. Data from the field study were reviewed and all uncompleted responses were excluded. This left 110 valid respondents. The data were both analyzed by qualitatively and quantitatively; responses from open-ended questions were grouped into classes that expressed similar ideas, while percentages based on valid responses only, were calculated from closed-ended questions. So these results comprise on use of questionnaire open- and closed- ended methodology and ethnomedicinal study of plant specimens after comparison with literature, Flora of Pakistan series 1-205 (Stewart, 1982; Nasir and Ali, 2002).

ENUMERATIONS

Abutilon indicum (L.) Sweet.

Family: Malvaceae

Ln: Kangi

ISL: 118

Habit: Undershrub

Disease: Syphilis

Plant part used: Roots and seeds.

Status: W, I

Preparation and administration: Root extract is taken orally while seeds are crushed and mixed with egg albumin and applied to penis to cure syphilis.

Acacia modesta Wall.

Family: Mimosaceae

Ln: Phulai

ISL: 38

Habit: Tree

Disease: Birth pain and body ache.

Plant Part used: Gum and bark

Status: W, I

Preparation and administration: Women use its gum with Desi Ghee (Butter obtained from buffalo and cow) and Papaver (*Papaver somniferum*) seeds (mixed together) to make 'Punjoori' after child birth, which give relief of labour pain and it provides potency to women. The tribal ladies also use its bark decoction and oil of *Setaria italica* in mixture as contraceptive tonic.

Ajuga bracteosa Wall. ex Benth.

Family: Lamiaceae

Ln: Hari booti

ISL: 99

Habit: Herb

Disease: Vomiting due to pregnancy

Plant Part used: Whole plant

Status: W, I

Preparation and administration: Plant extract is taken in interval to prevent unusual vomiting in initial days of pregnancy.

Allium sativum L.

Family: Liliaceae

Ln: Lissan

ISL: 203

Habit: Herb

Disease: Enhance conception

Plant part used: Bulb

Status: C, I

Preparation and administration: The bulb extract is applied in uterus to enhance conception and fertility.

Amaranthus viridis L.

Family: Amaranthaceae

Ln: Chulair

ISL: 168

Habit: Herb

Disease: Amenorrhoea

Plant Part used: Root

Status: W, I

Preparation and administration: Its root decoction is used thrice a day to control menstruation problems in females.

Anethum graveolense L.

Family: Apiaceae
Ln: Soya
ISL: 28
Habit: Herb
Disease: Galactagogue and indigestion
Plant part used: Seeds
Status: C, Int.
Preparation and administration: Women chew the seeds after delivery for easy digestion of food and it is also useful as lactagogue.

Azadirachta indica A. Juss.

Family: Meliaceae
Ln: Neem
ISL: 31
Habit: Tree
Disease: Emmenagogue and contraceptive
Plant part used: Leaf and seeds
Status: SW, Int.
Preparation and administration: Leaf extract is made and is used twice a day to stop excessive bleeding during menstrual period, while seed oil is used as contraceptive, 2 h before copulation.

Bombax ceiba L.

Family: Bombacaceae
Ln: Simbal
ISL: 82
Habit: Tree
Disease: Hydrocoele, leucorrhoea, gonorrhoea and menstrual disorders
Plant part used: Bark and flower
Status: SW, Int.
Preparation and administration: Its extract of bark is given for few days to cure sexual diseases like hydrocoele, leucorrhoea, gonorrhoea; its flowers are ground as powder and taken by women with milk to cure menstrual disorders.

Butea monosperma (Lam.) Taub.

Family: Fabaceae
Ln: Chichara
ISL: 171
Habit: Tree
Disease: Leucorrhoea and after birth bleeding
Plant part used: Bark and gum
Status: W, I
Preparation and administration: Fried gum is used in making Halwa' (a mixture of wheat flour and gum and oil) and given to women during leucorrhoea. Its ¼th cup of warm extract of bark is given to ladies as haemostatic after childbirth.

Ceropegia bulbosa Roxb.

Family: Asclepiadaceae
Ln: Glut
ISL: 04
Habit: Herb
Disease: Weak fertility
Plant part used: Tubers
Status: W, I
Preparation and administration: Its raw tubers are cooked and eaten by ladies to enhance fertility and vitality.

Corchorus trilocularis L.

Family: Tiliaceae
Ln: Kaunti
ISL: 55
Habit: Herb
Disease: Syphilis
Plant part used: Seeds and roots
Status: SW, Int.
Preparation and administration: To cure syphilis decoction of roots is used for several days, while seeds are powdered and used with root extract of *Clematis* sp. for 1 month.

Coriandrum sativum L.

Family: Apiaceae
Ln: Dhania
ISL: 43
Habit: Herb
Disease: To control birth rate
Plant part used: Seeds
Status: C, Int.
Preparation and administration: Its seeds soaked in water over night and given to male to produce sterility as an effective and cheaper method of population control.

Crateva magna (Lour.) D.C.

Family: Capparaceae
Ln: Maimana
ISL: 78
Habit: Tree
Disease: Abortifacient
Plant part used: Stem
Status: SW, Int.
Preparation and administration: The stem twig is put inside uterus for abortion, which occurs within 2-3 h.

Daucus carota L.

Family: Apiaceae
Ln: Gajar
ISL: 173
Habit: Herb

Disease: Abortifacient and emmenagogue

Plant part used: Seeds

Status: C, Int.

Preparation and administration: Its seeds decoction is used to regularise menstruation and its high dose is effective as abortifacient.

Echinops echinatus Roxb.

Family: Asteraceae

Ln: Oont booti

ISL: 186

Habit: Herb

Disease: Easy delivery

Plant part used: Roots

Status: W, I

Preparation and administration: Roots are kept in hand for easy delivery and relief of labour pain by tribal ladies.

Euphorbia caducifolia Hains.

Family: Euphorbiaceae

Ln: Danda Thor

ISL: 176

Habit: Tree

Disease: Abortifacient

Plant part used: Roots

Status: W, Int.

Preparation and administration: Its root decoction is used as effective abortifacient at initial stages.

Ficus bengalensis L.

Family: Moraceae

Ln: Bar, Bargad

ISL: 55

Habit: Tree

Disease: Male sterility and semen

Plant part used: Latex

Status: W, I

Preparation and administration: Five or ten drops of latex are taken with sweet (patasa) by men up to one or two months to make semen thick and regain sexual potentiality.

Ficus racemosa L.

Family: Moraceae

Ln: Pakwari

ISL: 280

Habit: Tree

Disease: Birth rate control

Plant part used: Bark

Status: W, I

Preparation and administration: The decoction of bark is used to check spermatogenesis and oogenesis for few weeks to control the population growth.

Hibiscus rosa-sinensis L.

Family: Malvaceae

Ln: Gul Khaira

ISL: 15

Habit: Undershrub

Disease: Genital irritation/ Urithritis

Plant part used: Root

Status: SW, Int.

Preparation and administration: Its root decoction is used to cure urithritis and genital irritation in penis of men.

Justicia adhatoda L.

Family: Acanthaceae

Ln: Baiker

ISL: 136

Habit: Shrub

Disease: Abortifacient.

Plant part used: Root

Status: W, I

Preparation and administration: Its root decoction is taken twice daily as powerful abortifacient for 7 days.

Nerium oleander L.

Family: Apocynaceae

Ln: Gandera

ISL: 131

Habit: Shrub

Disease: Abortifacient

Plant part used: Roots

Status: W, I

Preparation and administration: Roots extract is taken in minute quantity for abortion at initial stages, but its high dose is poisonous.

Ocimum basilicum L.

Family: Lamiaceae

Ln: Baburi

ISL: 101

Habit: Herb

Disease: Sexual sterility and strangury

Plant part used: Seeds

Status: W, I

Preparation and administration: Its seed extract is taken orally by men to increase sexual potency, while its juice (made from mixing its seed extract and raw sugar) is used to cure strangury.

Onosma bracteatum Wall. (Syn: *O. macrocephala* D. Done)

Family: Boraginaceae

Ln: Gao zaban

ISL: 213

Habit Herb

Disease: Syphilis and sexual potency

Plant part used: Whole plant

Status: C, I

Preparation and administration: The decoction of whole plant is orally taken for relief of syphilis and with gum of Phulai (*Acacia modesta*) is eaten for one month to gain sexual potency by women.

Pinus wallichiana A.B. Jacks.

Family: Pinaceae

Ln: Chir

ISL: 65

Habit: Tree

Disease: Gonorrhoea, blennorrhoea and Potency

Plant part used: Leaves and Seeds

Status: W, I

Preparation and administration: Its leaves decoction is used to cure gonorrhoea, blennorrhoea and as blood purifier also. Its seeds called chalkgoza, are eaten to get potency and vigour.

Putrangiva roxburgii Wall.

Family: Euphorbiaceae

Ln: Jia-putra

ISL: 233

Habit: Tree

Disease: Weakness of neonate

Plant part used: Fruit

Status: SW, Int.

Preparation and administration: A garland of fruit is put around neck of pregnant lady to produce healthy baby and then put it around neck of neonate for few months to recover neonate's weakness.

Solanum surattense Burm. f.

Family: Solanaceae

Ln: Mokari

ISL: 93

Habit: Herb

Disease: Abortifacient

Plant part used: Fruit and root

Status: W, I

Preparation and administration: Its fruit is used as abortifacient at initial stages. It is boiled and two cups of soup are taken at night, while its root decoction is used to treat haematuria.

Setaria italica (L.) P.Beauv

Family: Poaceae

Ln: Kangni ISL: 11

Habit: Herb

Disease: Sexual potency.

Plant part used: Seeds

Status: C, Int.

Preparation and administration: Its seeds crushed and mixed with ghee as in form of a cake, and eaten to get sexual vigor and potency.

Solanum nigrum L.

Family: Solanaceae

Ln: Mako

ISL: 12

Habit: Herb

Disease: Abortifacient

Plant part used: Whole plant

Status: W, I

Preparation and administration: Whole plant is boiled and extraction is taken orally as abortifacient and foetus is discharged in short time.

Tecomella undulata (Roxb.) Seem.

Family: Bignoniaceae

Ln Rohira/Palwana

ISL: 264.

Habit: Tree

Disease: Abortifacient and haemorrhoids

Plant part used: Bark and seeds

Status: SW, Int.

Preparation and administration: The bark is powdered and is used with hot milk for few days for abortion. Its seeds are crushed with extract of *Pinus* leaves, and taken to cure haemorrhoids.

Trachy spermumammi (L.) Sprague. ex. Turrill.

Family: Apiaceae

Ln: Ajwain

ISL: 176

Habit: Herb

Disease: Scanty menstruation

Plant part used: Seeds

Status: SW, Int.

Preparation and administration: The powdered seeds are mixed with Gor (Raw sugar) and Desi ghee (Butter) and taken orally once a day for three days by ladies having scanty menstruation and to regularise it. It is also used to clear uterus and regularise menstrual cycle after birth.

Tribulus terrestris L.

Family: Zygophyllaceae

Ln: Bakhara

ISL: 188

Habit: Tree

Disease: Impotency

Plant part used: Mucilaginous infusion

Status: W, I

Preparation and administration: Its mucilaginous infusion is boiled with milk and taken at to cure sexual impotency and weakness.

Vitis vitifera (L.) Theob.

Family: Vitaceae

Ln: Gangl angoor

ISL: 198

Habit: Herb/climber

Disease: Leucorrhoea, menorrhagia

Plant part used: Tuber

Status: W, I

Preparation and administration: Extract of tuber is taken in sexual diseases. For men, it increases potency, in females it is given in leucorrhoea and menorrhagia.

Withania coagulans (Stocks.) Dunal.

Family: Solanaceae

Ln: Paneer dodi

ISL: 149

Habit: Herb

Disease: Swellings pain of testis and emmenagogue

Plant part used: Fruit and Leaves

Status: SW, I

Preparation and administration: Its fruit infusion is used by women as emmenagogue and galactagogue. Leaves are crushed and pasted on testis to get relief from swellings pain.

Withania somnifera (L.) Dunal

Family: Solanaceae

Ln: Asgand

ISL: 30

Habit: Herb/under Shrub.

Disease: Abortifacient, haemostatic, hydrocoele, leucorrhoea, menorrhagia, sexual impotency and sterility.

Status: SW, I

Plant part used: Leaves, roots and whole plant.

Preparation and administration: Leaves extract one cup three times a day is used to stop blood flow from uterus after delivery. Its root powder is used to give power to body and lumber. But over dose may be abortifacient. Some times whole plant decoction with root of *Aspergus officinalis*, seeds of *Phaseolus mungo* and silageet stone are mixed and given to treat hydrocoele, leucorrhoea, menorrhagia and it also increases sexual potency and fertility.

Zingiber officinale Roscoe.

Family: Zingiberaceae

Ln: Adrak

Habit: Herb

Disease: Delivery pain

Plant part used: Tuber

Status: C, Int.

Preparation and administration: Its dried tuber powder is given to women after delivery as tonic to relief flatulence

and delivery pain with all dishes in first two weeks.

Ziziphus nummularia (Burm.f.) Wight. and Arn.

Family: Rhamnaceae

Ln: Koken ber

ISL: 181

Habit: Tree

Disease: Scanty Oogenesis

Plant part used: Fruit

Status: W, I

Preparation and administration: Its fruit is powdered and dipped in water and kept over night. Women take this extract at morning to increases oogenesis

RESULTS AND DISCUSSION

Plant species used for family planning: Thirty six plant species distributed in 26 families are used as ethnomedicines to control birth rate and sex-related diseases. Most of these families are dichotomous except Pinaceae (Gymnosperm), Liliaceae and Poaceae (monochotomous). The families with the largest plant species used for birth control as used in ethnomedicinal prescriptions are Solanaceae and Apiaceae with four species each, Euphorbiaceae, Lamiaceae, Moraceae, Malvaceae have two plants each, while remaining families are represented by one plant each. The two families Solanaceae and Apiaceae have the highest diversity of species used as ethnomedicines because they contain relatively more species than other families in the area. In the present traditional EM study of local plants as; *Daucus carota*, *Solanum surrattense*, *Solanum nigrum*, *Tecomella undulata* and *Justicia adhatoda* are usually used as abortifacient to control birth rate in initial stages, while *Amaranthus viridis*, *Trachyspermum ammi* are used to regularize menstrual cycle. The tribal ladies use decoction of bark of *Acacia modesta* and oil of *Setaria italica* as conceptive while *Azadirachta indica* oil is effective as contraceptive. *Ficus racemosa* is used to check spermatogenesis and oogenesis, *Coriandrum sativum* seeds are used to check spermatogenesis. Some plants as *Setaria italica*, *Tribulus terrestris*, *Ceropegia bulbosa* and *Ficus bengalensis* are used to increase fertility both in male and female. *Ziziphus nummularia* is used to increase oogenesis and *Ceropegia bulbosa* is used by women to increase potency, *Ficus bengalensis* and *Tribulus terrestris* are used to enhance sexual potency in men.

Common sexual diseases and treatment: The local people mentioned some sex-related diseases as; gonorrhoea, leucorrhoea, menorrhagia, syphilis, hydrocoele, vomiting due to pregnancy, menstruation disorders, genital irritation (Urithritis), swelling of testis, weakness of

Abbreviations used: ISL = voucher number assigned to specimen deposited at Herbarium, Islamabad.

Ln: Local name, W: wild, C: cultivated, SW: semi wild, I: indigenous, Int: introduced, EM: ethnomedicines

Table 1: Some sex-related diseases of the study area

English gloss	Local name	f
Amenorrhoea	Haiz ki bandish	85
Blennorrhoea	Biari boo	81
Leucorrhoea	Lokoro	77
Hydrocoele	Mongoota	65
Abortion	Tohroo	59
Male sterility	Khasi	51
Semen thickness	Surat inzal	31
Genital irritation	Masanakigarmi	25
Neonate weakness	Pashawan	21
Bleeding after birth	Nafaas	18
Birth pain	Dardi zai	19
Vomiting due to pregnancy	Hamalkinishani	17
Scarcity of milk	Sookana	10
Enhance contraception	Haamal terana	9
Excessive menstruation	Haizi ki kassrat	5
Scanty menstruation	Haizi ki kami	5
Menorrhagia	Haizi ki boot kassrat	3
Urthritis	Urethra ka pool jana	3
Syphilis	Bowaseer	3
Haematuria	Soozak	2
Haemorrhoids	Boowaseeri badi	2

Frequency (f) refers to the number of respondents who reported the disease (total 110)

neonate, scarcity of milk and sexual impotency and their conditions. Some of these diseases described by tribal people indicated the symptoms/local names of diseases (Table 1). The naming of diseases by local people when compared to western medicines system, at times did not distinguish between diseases and symptoms of diseases. This is because that local disease nomenclature is based on symptoms of diseases, where as under western system, diseases are named according to aetiological information. For treatment tribals use; *Hibiscus rosa-sinensis* to cure genital irritation of penis in men, *Withania somnifera*, *Bombax ceiba* and *Vitis vitiginea* are used to cure sexual diseases such as hydrocoele, leucorrhoea, and menorrhagia while *Zingiber officinalis* is useful to cure of flatulence and delivery pain. *Trachyspermum ammi* is used for regularising menses after delivery, *Setaria italica* is good for sexual weakness, *Onosma bracteatum*, *Corchorus trilocularis* and *Abutilon indicum* are effective against syphilis, *Ocimum basilicum* for sex-potency, *Ajuga bracteosa* for cure of vomiting at initial days of pregnancy, while for treatment of leucorrhoea and hydrocoele *Butea monosperma* and *Bombax ceiba* are oftenly used.

The main attributes of plants used for birth control and sex diseases treatment are that the plants grow wild (55.55%), are indigenous to Samahni (61.11%) and are mainly herbs (52.77%; Fig. 1). The most frequently employed plant parts are seeds (22.72%), followed by roots (20.45%) and leaves and fruit (9.090%) each (Fig. 1). The practice of exploiting perennial plant parts, such as roots of slow growing woody species, can result in a decline, both the size and distributions of populations

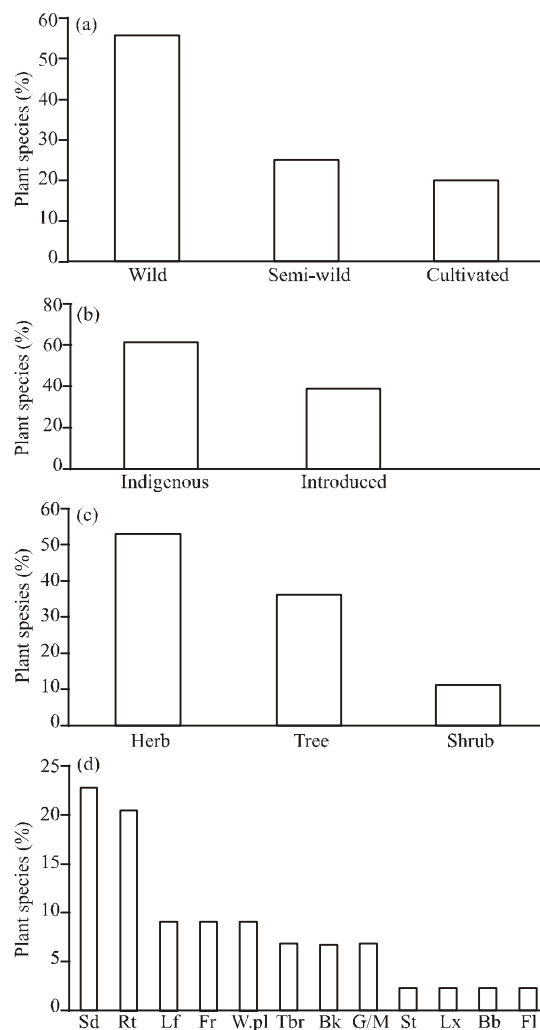


Fig. 1: Characteristics of plants used as ethnomedicines in Samahni valley (n = 36). (a) Management status. (b) status of origin (c) growth habit (d) plant parts used (sd = seed, rt = root, lf = leaf, fr = fruit, w.pl = wild plant, tbr = tuber, bk = bark, g/m = gum/mucilage, st = stem, lx = latex, bb = bulb, fl = flower)

of exploited plants species, and ultimately results in local extinction of these populations (Cunningham, 1993; Sheldon *et al.*, 1997; Dhillion and Amundsen, 2000). Generally aims at conserving plants can be improved, if the species selected has many different uses, as multiple uses can motivate people to conserve species (Aguilar and Condit, 2001; Etkin, 2002).

Ethnomedicinal treatment and human health: The majority of the respondents interviewed (68%) employ herbal treatment as first line treatment. If the patient does

not improve then medical practitioner is consulted. While other (32%) seek proper services of doctor when they fell sick. Thus majority of people mostly rely on EM as their first line of defense in treatment of sex-related (and other) diseases and control birth rate, this may be as EM is effective, freely and locally available. Using these plants the people of valley can treat diseases/conditions namely; gonorrhoea, leucorrhoea, menorrhagia, amenorrhoea, blennorrhoea, haematuria, urthritis, syphilis, hydrocoele, vomiting due to pregnancy, menstruation disorders, genital irritation, swelling of testis, weakness of neonate, scarcity of milk and sexual impotency. EM practices are employed as mostly infusions, powdered, decoctions and some times applied topically.

CONCLUSION

There is much EM knowledge concerning about birth control and sexual diseases treatment within the community of Samahni valley. In the present study, it is recorded that thirty six ethnomedicinal plants of twenty six families are used by tribals to cure sex-related diseases; syphilis, leucorrhoea, menorrhagia, gonorrhoea, genital irritation of penis, hydrocoele, to regularise menstruation, to reduce delivery pain, to increase fertility in men and women, and for family planning either to check spermatogenesis or to check oogenesis. The EM knowledge of inhabitants of area on abortifacient, sexual fertility and female contraceptives, which is one of the important informal innovations used by them and is quite relevant to present day situation. This EM knowledge on Samahni valley is not reported in literature. The other issues needed to be addressed are efficacy, quality, safety and standardization of doses. It appears that exploitation of some of wild plants for EM is unsustainable and might threaten the local plant population. These purported ethnomedicinal and ethnobotanical informations of plants require further research, while efficacy of various indigenous practices and folklore uses should be subjected to pharmaceutical and phytochemical investigations in order to identify how these can be of practical advantage in medicine development. For local communities, this research should stimulate the implementation of re-collected data inside concrete eco-sustainable inter-disciplinary project, involving natural, social, cultural and economic aspects.

ACKNOWLEDGMENTS

One of authors, Muhammad Ishtiaq Chaudhary is thankful to Prof. Dr. Mir Ajab Khan and Prof. Dr. Rizwana A.Q. Quaid-e-Azam University and all informants who shared their EM knowledge, for their excellent

co-operation in collection, identification of plant specimens and verification of some of collected ethnomedicinal informations by comparison with literature, Flora of Pakistan in Herbarium (ISL) of Quaid-e-Azam University Islamabad, Pakistan.

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